

# ARDCM-1PHS Single-Phase PLC Module User Manual

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# About This Document

## Purpose

This document describes the technical specifications, functions, and installation methods of the ARDCM-1PHS single-phase PLC module.






## Intended Audience

This document is intended for:

- Technical support engineers
- Maintenance engineers

## Symbol Conventions

The symbols that may be found in this document are defined as follows.

Symbol	Description
 <b>DANGER</b>	Indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury.
 <b>WARNING</b>	Indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.
 <b>CAUTION</b>	Indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury.
 <b>NOTICE</b>	Indicates a potentially hazardous situation which, if not avoided, could result in equipment damage, data loss, performance deterioration, or unanticipated results. NOTICE is used to address practices not related to personal injury.
 <b>NOTE</b>	Calls attention to important information, best practices and tips. NOTE is used to address information not related to personal injury, equipment damage, and environment deterioration.

## Change History

Changes between document issues are cumulative. The latest document issue contains all the changes made in earlier issues.

### Issue 01 (2016-10-10)

This is the first official release.

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# 1 Product Overview

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## 1.1 Application Scenarios

The ARDCM-1PHS is the ARDCM's terminal communication module that is used on a meter to collect data and send collected data to the AR-DCM. This module uses power line communication (PLC) technology to upload and download data, implementing remote wireless control.

It is used for intelligent meter reading and applicable to various scenarios that use smart meter systems, such as smart household and smart building.

## 1.2 Functions

The ARDCM-1PHS module provides the following functions:

- Uses PLC technology to upload information.
- Enables remote meter reading, which is convenient and time-saving.

## 1.3 Appearance

Figure 1-1 ARDCM-1PHS appearance



## 1.4 Technical Specifications

Table 1-1 ARDCM-1PHS technical specifications

Item	Description
Communication method	PLC
Working frequency	1-30 MHz
External interfaces	High-voltage interface (single-phase meter connector 2) Low-voltage interface (single-phase meter connector 1)
Operating temperature	Long-term operating temperature: -40 °C to +70 °C (-40 °F to +158 °F)
Altitude	0-4000 m (0-13123 ft.)
Storage temperature	-40 °C to +85 °C (-40 °F to +185 °F)
Power consumption	< 12 W
Dimensions (W x D x H)	64.4 mm x 44.4 mm x 12 mm (2.54 in. x 1.75 in. x 0.47 in.)
Weight	49.6 g (0.11 lb)

# 2 Installation Guide

## 2.1 Packing List

Open the package and check the product in the package. In the case of any problem, contact the supplier.

**Table 2-1** ARDCM-1PHS packing list

Item	Accessory
PLC module	None
Integrated assembly (PLC module + shell)	None

## 2.2 Installation Instructions

The ARDCM-1PHS single-phase PLC module must be used on a single-phase PLC meter. Before installing the module, check whether the meter is the matching type.



### **DANGER**

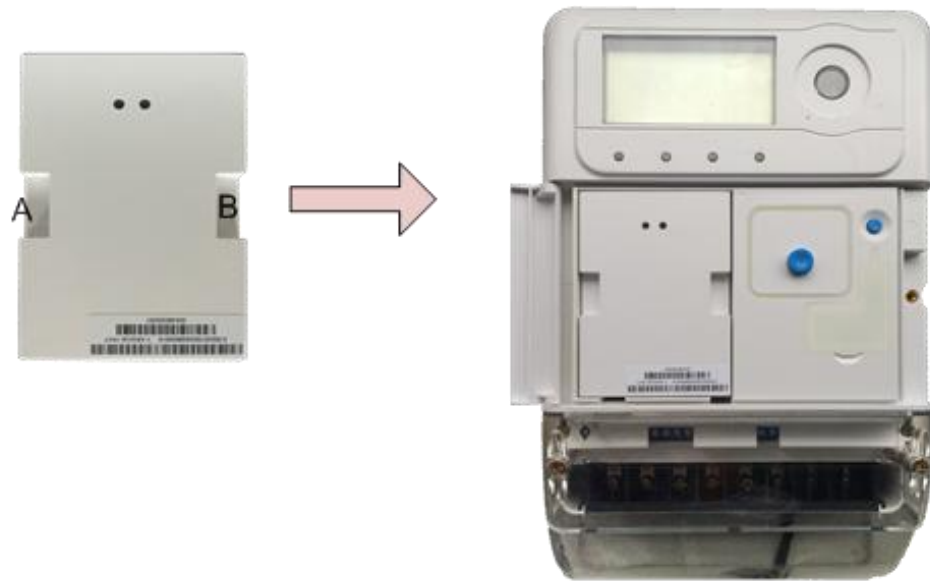
Installation and commissioning of the module must be performed by trained personnel. Before the installation, turn off the power.

### 2.2.1 Installation Procedure

- Step 1** Use your fingers to hold the recesses on the PLC module (A and B in the following figure), with the indicators on the top. Then mount the PLC module to the meter vertically.



**Figure 2-1** Installing the PLC module



**Step 2** Check against the following checklist.

Item	Status
1	The power cables and ground cable are properly connected, meeting power supply requirements.
2	Labels of all cables are correct, clear, and tidy.
3	The PLC module is securely mounted on the meter.
4	There are no other objects on the meter.

----End

## 2.3 Module Replacement

An ARDCM-1PHS single-phase PLC module can only be replaced with a PLC module of the same model. Before the replacement, check the model of the replacement module. The replacement procedure is similar to the installation procedure.



## **DANGER**

Installation and commissioning of the module must be performed by trained personnel. Before the replacement, turn off the power.

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This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.